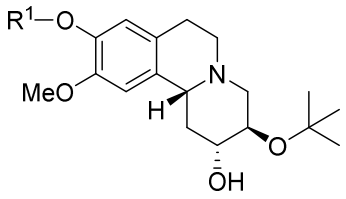
CLAIMS

1. A compound of Formula (**Ie**):



(Ie),

or a pharmaceutically acceptable salt thereof, wherein:

R^1 is selected from: methyl, methyl-d_3, 2,2-difluoropropyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoropropyl, cyclopropyl, (1-fluorocyclopropyl)methyl, 2-hydroxypropyl, ethyl, ethyl-d_5, isopropyl, 2-methoxyethyl, (cyclopropyl)methyl, (cyclopropyl)methyl-d_2, 3-fluoropropyl, 2-fluoroethyl, 2-((2-cyanopropan-2-yl)oxy)ethyl, 1,1,1-trifluoropropan-2-yl, 2,2-difluoroethyl, oxetan-3-yl, oxetan-3-ylmethyl, (oxetan-2-yl)methyl, 3,3,3-trifluoro-2-hydroxypropyl, 4,4,4-trifluorobutyl, 3-methoxypropyl, (3,3-difluorocyclobutyl)methyl, (1-(difluoromethyl)cyclopropyl)methyl, 5,5,5-trifluoropentyl, (3-fluorobicyclo[1.1.1]pentan-1-yl)methyl, fluoromethyl, (2,2-difluorocyclopropyl)methyl, 2-(trifluoromethoxy)ethyl, 3-fluorocyclobutyl, (2-fluorocyclopropyl)methyl, and 2-fluoropropyl.

2. The compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein:

R^1 is selected from: methyl, methyl-d_3, 2,2-difluoropropyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoropropyl, cyclopropyl, (1-fluorocyclopropyl)methyl, (*R*)-2-hydroxypropyl, ethyl, ethyl-d_5, isopropyl, 2-methoxyethyl, (cyclopropyl)methyl, (cyclopropyl)methyl-d_2, 3-fluoropropyl, 2-fluoroethyl, 2-((2-cyanopropan-2-yl)oxy)ethyl, 1,1,1-trifluoropropan-2-yl, 2,2-difluoroethyl, oxetan-3-yl, oxetan-3-ylmethyl, ((*R*)-oxetan-2-yl)methyl, (*S*)-3,3,3-trifluoro-2-hydroxypropyl, 4,4,4-trifluorobutyl, 3-methoxypropyl, (3,3-difluorocyclobutyl)methyl, (1-(difluoromethyl)cyclopropyl)methyl, 5,5,5-trifluoropentyl, (3-fluorobicyclo[1.1.1]pentan-1-yl)methyl, fluoromethyl, ((*S*)-2,2-difluorocyclopropyl)methyl, ((*R*)-2,2-difluorocyclopropyl)methyl, 2-(trifluoromethoxy)ethyl, (1*r*,3*R*)-3-fluorocyclobutyl, ((1*R*,2*S*)-2-

fluorocyclopropyl)methyl, ((1*S*,2*R*)-2-fluorocyclopropyl)methyl, ((1*S*,2*S*)-2-fluorocyclopropyl)methyl, ((1*R*,2*R*)-2-fluorocyclopropyl)methyl, and (*R*)-2-fluoropropyl.

3. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9,10-dimethoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 15),

or a pharmaceutically acceptable salt thereof.

4. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9,10-dimethoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 15).

5. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(2,2-difluoropropoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 16),

or a pharmaceutically acceptable salt thereof.

6. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(2,2-difluoropropoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 16).

7. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(2,2,2-trifluoroethoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 17),

or a pharmaceutically acceptable salt thereof.

8. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(2,2,2-trifluoroethoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 17).

9. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(3,3,3-trifluoropropoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 18),

or a pharmaceutically acceptable salt thereof.

10. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(3,3,3-trifluoropropoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 18).

11. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-cyclopropoxy-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 19),

or a pharmaceutically acceptable salt thereof.

12. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-cyclopropoxy-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 19).

13. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-((1-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 20),

or a pharmaceutically acceptable salt thereof.

14. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-((1-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 20).

15. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-ethoxy-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 22),

or a pharmaceutically acceptable salt thereof.

16. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-ethoxy-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 22).

17. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(cyclopropylmethoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 25),

or a pharmaceutically acceptable salt thereof.

18. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(cyclopropylmethoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 25).

19. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(3-fluoropropoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 26),

or a pharmaceutically acceptable salt thereof.

20. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(3-fluoropropoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 26).

21. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(ethoxy-d_5)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 30),

or a pharmaceutically acceptable salt thereof.

22. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(ethoxy-d_5)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 30).

23. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(2,2-difluoroethoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 31),

or a pharmaceutically acceptable salt thereof.

24. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(2,2-difluoroethoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 31).

25. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(4,4,4-trifluorobutoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 36),

or a pharmaceutically acceptable salt thereof.

26. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-10-methoxy-9-(4,4,4-trifluorobutoxy)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 36).

27. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-((3,3-difluorocyclobutyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 38),

or a pharmaceutically acceptable salt thereof.

28. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-((3,3-difluorocyclobutyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 38).

29. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((*S*)-2,2-difluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 43),

or a pharmaceutically acceptable salt thereof.

30. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((*S*)-2,2-difluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 43).

31. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((*R*)-2,2-difluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 44), or a pharmaceutically acceptable salt thereof.

32. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((*R*)-2,2-difluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 44).

33. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*R*,2*S*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 61), or a pharmaceutically acceptable salt thereof.

34. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*R*,2*S*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 61).

35. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*S*,2*R*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 62), or a pharmaceutically acceptable salt thereof.

36. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*S*,2*R*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 62).

37. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*S*,2*S*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 67),
or a pharmaceutically acceptable salt thereof.

38. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*S*,2*S*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 67).

39. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*R*,2*R*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 68),
or a pharmaceutically acceptable salt thereof.

40. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(((1*R*,2*R*)-2-fluorocyclopropyl)methoxy)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 68).

41. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(tert-butoxy)-10-methoxy-9-(methoxy-d_3)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 80),
or a pharmaceutically acceptable salt thereof.

42. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(tert-butoxy)-10-methoxy-9-(methoxy-d_3)-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 80).

43. The compound according to claim 1 that is:
(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(cyclopropylmethoxy-d_2)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 99),
or a pharmaceutically acceptable salt thereof.

44. The compound according to claim 1 that is:

(2*R*,3*R*,11b*R*)-3-(*tert*-butoxy)-9-(cyclopropylmethoxy-d_2)-10-methoxy-1,3,4,6,7,11b-hexahydro-2*H*-pyrido[2,1-a]isoquinolin-2-ol (Compound 99).

45. A pharmaceutical product selected from:

a pharmaceutical composition,

a formulation,

a unit dosage form, and

a kit;

each comprising the compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof.

46. A pharmaceutical product selected from:

a pharmaceutical composition,

a formulation,

a unit dosage form, and

a kit;

each comprising the compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable excipient.

47. A pharmaceutical composition comprising the compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof, and
at least one pharmaceutically acceptable excipient.

48. A method for preparing a pharmaceutical composition comprising:

the step of admixing a compound according to any one of claims 1-44,
or a pharmaceutically acceptable salt thereof, and
a pharmaceutically acceptable carrier.

49. A compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
for use in therapy.

50. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating a vesicular monoamine transporter-2 (VMAT2) disease or disorder selected from:

an ataxias or spinal muscular atrophy; a chorea; a congenital malformation, deformation, or abnormality; a dementia; an oral cavity, salivary gland, or jaw disease; a dyskinesia; a dystonia; an endocrine, nutritional, or metabolic disease; an epilepsy; a habit or impulse disorder; a Huntington's disease or related disorder; a mood or psychotic disorder; a neurotic, stress-related, and somatoform disorder; a degenerative disease of the basal ganglia; an extrapyramidal and movement disorder; a neurological or psychiatric disease or disorder; a nervous system or motor function disorder; a Parkinson's/parkinsonism disorder; a pediatric-onset behavioral and emotional disorder; a pervasive developmental disorder; and a substance abuse or dependence disorder.

51. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating a neurological or psychiatric disease or disorder.

52. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating a neurological or psychiatric disease or disorder selected from the group consisting of:
hyperkinetic movement disorder, schizophrenia, schizoaffective disorder, a mood disorder, treatment-refractory obsessive-compulsive disorder, neurological dysfunction associated with Lesch-Nyhan syndrome, agitation associated with Alzheimer's disease, Fragile X syndrome or Fragile X-associated tremor-ataxia syndrome, autism spectrum disorder, Rett syndrome, and chorea-acanthocytosis.

53. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating a hyperkinetic movement disorder.

54. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating a hyperkinetic movement disorder;
wherein the hyperkinetic movement disorder is selected from the group consisting of: tardive dyskinesia, Tourette's syndrome, Huntington's disease, tics, chorea associated with Huntington's disease, ataxia, chorea, dystonia, hemifacial spasm, myoclonus, restless leg syndrome, and tremors.

55. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating tardive dyskinesia.

56. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating Huntington's disease.

57. Use of a compound according to any one of claims 1-44, or a pharmaceutically acceptable salt thereof;
a pharmaceutical product according to claim 45 or 46; or
a pharmaceutical composition according to claim 47;
in the manufacture of a medicament for treating chorea associated with Huntington's disease.

58. The use according to claim 50 or 51, wherein:
the neurological or psychiatric disease or disorder is selected from schizophrenia and schizoaffective disorder.

59. The use according to claim 50 or 51, wherein:

the neurological or psychiatric disease or disorder is schizophrenia.

60. The use according to claim 50 or 51, wherein:

the neurological or psychiatric disease or disorder is schizoaffective disorder.

61. The use according to claim 50 or 51, wherein:

the neurological or psychiatric disease or disorder is obsessive-compulsive disorder.

62. The use according to claim 50 or 51, wherein:

the neurological or psychiatric disease or disorder is treatment-refractory obsessive-compulsive disorder.

63. The use according to claim 50 or 51, wherein:

the neurological or psychiatric disease or disorder is autism spectrum disorder.

64. The compound, salt, product, or composition for use according to claim 49, or the use according to any one of claims 50-63, wherein:

treating comprises using the compound, salt, product, or composition in adjunctive therapy.